

# Comparisons of Job Characteristics

Focus Occupation: **Actuaries (15-2011)**

Associated Occupation: **Mathematicians (15-2021)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 72

Focus Occupation: Actuaries (15-2011)

Associated Occupation: Mathematicians (15-2021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	9.2	25.0	24.8	0 Current knowledge level may be sufficient
Computers and Electronics	8.4	17.2	15.9	0 Current knowledge level may be sufficient
Engineering and Technology	5.7	12.6	2.4	<< Extensive education and/or training may be required
Physics	4.3	11.6	2.0	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Actuaries (15-2011)

Associated Occupation: Mathematicians (15-2021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	6.2	23.2	17.2	<< Extensive development of skills in this area may be required
Active Learning	8.7	16.4	11.7	<< Extensive development of skills in this area may be required
Reading Comprehension	10.7	16.3	14.8	< A higher skill level may be required
Critical Thinking	10.8	16.0	16.4	0 Current skill level may be sufficient
Complex Problem Solving	9.1	15.1	14.8	0 Current skill level may be sufficient
Science	4.5	13.0	4.8	<< Extensive development of skills in this area may be required
Learning Strategies	7.2	11.5	10.7	0 Current skill level may be sufficient
Programming	2.2	6.2	6.7	0 Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 95			
Focus Occupation: Actuaries (15-2011) Associated Occupation: Mathematicians (15-2021)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematical Reasoning	6.3	20.6	17.3	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.4	15.2	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.7	15.5	0	Current ability level may be sufficient
Number Facility	6.3	15.5	17.0	0	Current ability level may be sufficient
Originality	7.6	15.0	9.9	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	14.7	12.6	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.4	14.5	0	Current ability level may be sufficient
Fluency of Ideas	7.6	14.3	11.0	<<	Extensive improvement in abilities may be required
Speed of Closure	5.9	9.3	7.5	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 95
Focus Occupation: Actuaries (15-2011) Associated Occupation: Mathematicians (15-2021)		
Work Activities	Exclusivity of Activity	
Advise clients or customers	19	
Analyze scientific research data or investigative findings	27	
Analyze social or economic data	63	
Collect statistical data	47	
Communicate technical information	4	
Compile numerical or statistical data	38	
Create mathematical or statistical diagrams or charts	43	
Develop mathematical ideas or interpretations	85	
Develop mathematical simulation models	70	
Develop or maintain databases	30	
Develop tables depicting data	33	
Explain complex mathematical information	30	

Make presentations	13
Perform statistical modeling	76
Prepare reports	8
Prepare technical reports or related documentation	22
Provide expert testimony on research results	66
Use computers to enter, access or retrieve data	3
Use knowledge of investigation techniques	16
Use mathematical or statistical methods to identify or analyze problems	30
Use quantitative research methods	35
Use relational database software	26
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 83

**Focus Occupation: Actuaries (15-2011)**  
**Associated Occupation: Mathematicians (15-2021)**

Tools and Technologies	Exclusivity
Calculating machines and accessories	3
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Information exchange software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.